

WHAT IS CLAIMED IS:

1 1. A heat history control system comprising: a CPU; a
2 memory; a thermal print head having a heat generating element;
3 and a thermal print head interface unit, wherein
4 said memory stores printing data,
5 said CPU reads, from said memory, printing data on a target
6 line to be printed subsequently and printing data on a plurality
7 of immediately preceding lines, performs an arithmetic operation
8 with respect to the read printing data to determine a history
9 pattern, stores the determined history pattern in said memory,
10 reads, from said memory, the history pattern of a history factor
11 which is a dot exerting influence of heat accumulation on a target
12 dot to be printed subsequently, transmits the read history
13 pattern to said thermal print head interface unit, and transmits
14 a history timer value preliminarily allocated to said history
15 factor to said thermal print head interface unit, and
16 said thermal print head interface unit drives said thermal
17 print head based on said history pattern and on said history
18 timer value.

1 2. The heat history control system of claim 1, wherein
2 said thermal print head interface unit determines an energization
3 time for the heat generating element for printing said target
4 dot as a time obtained by subtracting said history timer value
5 of said energized history factor from an energization time when
6 heat history control is not performed.

1 3. The heat history control system of claim 1, wherein

2 said history timer value is weighed in accordance with a degree
3 of influence exerted by said history factor on said target dot.

1 4. The heat history control system of claim 1, wherein
2 said CPU performs the arithmetic operation by ignoring a 2nd
3 previous history factor when a 1st previous history factor
4 immediately preceding said target dot has been energized.

1 5. A heat history control system comprising: a CPU; a
2 memory; and a thermal print head having a heat generating element,
3 wherein
4 said memory stores printing data,
5 said CPU reads, from said memory, printing data on a target
6 line to be printed subsequently and printing data on a plurality
7 of immediately preceding lines, performs an arithmetic operation
8 with respect to the read printing data to determine a history
9 pattern, stores the determined history pattern in said memory,
10 reads, from said memory, the history pattern of a history factor
11 which is a dot exerting influence of heat accumulation on a target
12 dot to be printed subsequently, and transmits, to said thermal
13 print head, a drive signal generated based on the read history
14 pattern and on a history timer value preliminarily allocated
15 to said history factor, and
16 said thermal print head energizes the heat generating
17 element based on said drive signal.

1 6. The heat history control system of claim 5, wherein
2 said CPU determines an energization time for the heat generating

3 element for printing said target dot as a time obtained by
4 subtracting said history timer value of said energized history
5 factor from an energization time when heat history control is
6 not performed.

1 7. The heat history control system of claim 5, wherein
2 said history timer value is weighed in accordance with a degree
3 of influence exerted by said history factor on said target dot.

1 8. The heat history control system of claim 5, wherein
2 said CPU performs the arithmetic operation by ignoring a 2nd
3 previous history factor when a 1st previous history factor
4 immediately preceding said target dot has been energized.

1 9. A printer comprising: a CPU; a memory; a thermal print
2 head having a heat generating element; and a thermal print head
3 interface unit, wherein
4 said memory stores printing data,
5 said CPU reads, from said memory, printing data on a target
6 line to be printed subsequently and printing data on a plurality
7 of immediately preceding lines, performs an arithmetic operation
8 with respect to the read printing data to determine a history
9 pattern, stores the determined history pattern in said memory,
10 reads, from said memory, the history pattern of a history factor
11 which is a dot exerting influence of heat accumulation on a target
12 dot to be printed subsequently, transmits the read history
13 pattern to said thermal print head interface unit, and transmits
14 a history timer value preliminarily allocated to said history

15 factor to said thermal print head interface unit, and
16 said thermal print head interface unit drives said thermal
17 print head based on said history pattern and on said history
18 timer value.

1 10. The printer of claim 9, wherein said thermal print
2 head interface unit determines an energization time for the heat
3 generating element for printing said target dot as a time obtained
4 by subtracting said history timer value of said energized history
5 factor from an energization time when heat history control is
6 not performed.

1 11. The printer of claim 9, wherein said history timer
2 value is weighed in accordance with a degree of influence exerted
3 by said history factor on said target dot.

1 12. The printer of claim 9, wherein said CPU performs the
2 arithmetic operation by ignoring a 2nd previous history factor
3 when a 1st previous history factor immediately preceding said
4 target dot has been energized.

1 13. A printer comprising: a CPU; a memory; and a thermal
2 print head having a heat generating element, wherein
3 said memory stores printing data,
4 said CPU reads, from said memory, printing data on a target
5 line to be printed subsequently and printing data on a plurality
6 of immediately preceding lines, performs an arithmetic operation
7 with respect to the read printing data to determine a history

8 pattern, stores the determined history pattern in said memory,
9 reads, from said memory, the history pattern of a history factor
10 which is a dot exerting influence of heat accumulation on a target
11 dot to be printed subsequently, generates a drive signal based
12 on the read history pattern and on a history timer value
13 preliminarily allocated to said history factor, and transmits
14 the generated drive signal to said thermal print head, and
15 said thermal print head applies a voltage to the heat
16 generating element based on said drive signal.

1 14. The printer of claim 13, wherein said CPU determines
2 an energization time for the heat generating element for printing
3 said target dot as a time obtained by subtracting said history
4 timer value of said energized history factor from an energization
5 time when heat history control is not performed.

1 15. The printer of claim 13, wherein said history timer
2 value is weighed in accordance with a degree of influence exerted
3 by said history factor on said target dot.

1 16. The printer of claim 13, wherein said CPU performs
2 the arithmetic operation by ignoring a 2nd previous history
3 factor when a 1st previous history factor immediately preceding
4 said target dot has been energized.

1 17. A program allowing a computer to perform the process
2 steps of:
3 reading, from a memory, printing data on a target line

4 to be printed subsequently and printing data on a plurality of
5 immediately preceding lines;
6 performing an arithmetic operation with respect to the
7 read printing data to determine a history pattern;
8 storing the determined history pattern in said memory;
9 reading, from said memory, the history pattern of a history
10 factor which is a dot exerting influence of heat accumulation
11 on a target dot to be printed subsequently;
12 transmitting the read history pattern to a thermal print
13 head interface unit; and
14 transmitting a history timer value preliminarily
15 allocated to said history factor to said thermal print head
16 interface unit.

1 18. The program of claim 17, wherein said history timer
2 value is weighed in accordance with a degree of influence exerted
3 by said history factor on said target dot.

1 19. The program of claim 17, wherein said CPU performs
2 the arithmetic operation by ignoring a 2nd previous history
3 factor when a 1st previous history factor immediately preceding
4 said target dot has been energized.

1 20. A program allowing a computer to perform the process
2 steps of:
3 reading, from a memory, printing data on a target line
4 to be printed subsequently and printing data on a plurality of
5 immediately preceding lines;

6 performing an arithmetic operation with respect to the
7 read printing data to determine a history pattern;
8 storing the determined history pattern in said memory;
9 reading, from said memory, the history pattern of a history
10 factor which is a dot exerting influence of heat accumulation
11 on a target dot to be printed subsequently; and
12 transmitting, to a thermal print head, a drive signal
13 generated based on the read history pattern and on a history
14 timer value preliminarily allocated to said history factor.

1 21. The program of claim 20, wherein a time for said drive
2 signal is determined as a time obtained by subtracting said
3 history timer value of said energized history factor from an
4 energization time when heat history control is not performed.

1 22. The program of claim 20, wherein said history timer
2 value is weighed in accordance with a degree of influence exerted
3 by said history factor on said target dot.

1 23. The program of claim 20, wherein said CPU performs
2 the arithmetic operation by ignoring a 2nd previous history
3 factor when a 1st previous history factor immediately preceding
4 said target dot has been energized.